Owner's Manual

MOON Classic Series

Equinox *SE*

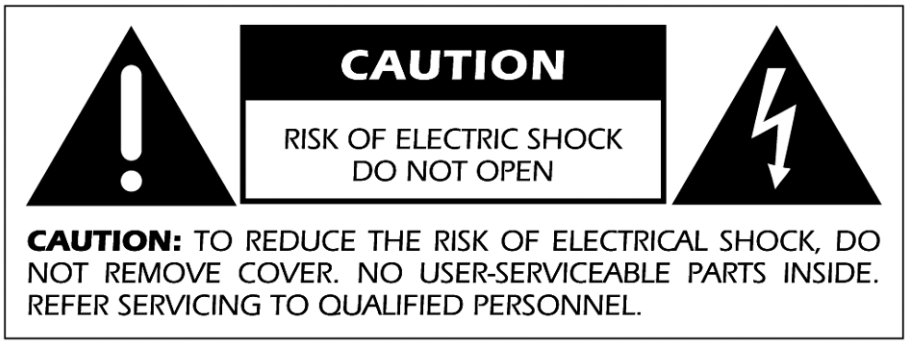
CD Player

MOON

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or another apparatus that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments and accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No naked flame sources, such as candles, should be placed on the apparatus.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

Important Safety Instructions (cont'd)

The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

Please read all instructions and precautions carefully and completely before operating your Simaudio MOON Equinox SE CD Player.

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.
2. The MOON Equinox *SE* must be terminated with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. Connect the MOON Equinox *SE* only to an AC source of the proper voltage; Both the shipping box and rear panel serial number label will indicate the correct voltage. Use of any other voltage will likely damage the unit and void the warranty
3. AC extension cords are **NOT** recommended for use with this product.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate the MOON Equinox *SE* with any covers removed. There are no user-serviceable parts inside. An open unit, especially if it is still connected to an AC source, presents a potentially lethal shock hazard. Refer all questions to authorized service personnel only.
6. **NEVER** wet the inside of the MOON Equinox *SE* with any liquid. If a liquid substance does enter your MOON Equinox *SE*, immediately disconnect it from the AC mains and take it to your MOON dealer for a complete check-up.
7. **NEVER** spill or pour liquids directly onto the MOON Equinox *SE* .
8. **NEVER** block air flow through ventilation slots or heatsinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified
11. **NEVER** attempt to repair the MOON Equinox *SE* . If a problem occurs contact your MOON dealer.
12. **NEVER** expose the MOON Equinox *SE* to extremely high or low temperatures.
13. **NEVER** operate the MOON Equinox *SE* in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

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www.simaudio.com

Congratulations!

Thank you for selecting the **MOON Equinox *SE*** CD Player as a part of your music/cinema system. This component has been designed to offer state-of-the-art high-end performance in an elegant package, while retaining all the sonic hallmarks on which Simaudio has made its reputation. We have spared no effort to ensure that it is amongst ***the finest*** CD Players available. We have been building high-performance audio equipment for over 25 years, and the know-how gained through our cumulative experience is an important reason why **MOON** CD Players are so musically satisfying.

The performance of your **Equinox *SE*** will continue to improve during the first 400 hours of listening. This is the result of a "break-in" period required for the numerous high quality electronic parts used throughout this CD Player.

Before setting up your new **MOON Equinox *SE***, we encourage you to please read this manual thoroughly to properly acquaint yourself with its features. We hope you enjoy listening to the **Equinox *SE*** CD Player as much as the pride we have taken in creating this fine audio product. We understand the power and emotion of music and build our products with the goal of faithfully capturing these elusive qualities.

The information contained in this manual is subject to change without notice. The most current version of this manual is available on our official website at http://www.simaudio.com/manuals.htm

Unpacking

The **MOON Equinox *SE*** CD Player should be removed from its box with care.

The following accessories should be included inside the box with your CD Player:

- ✓ *AC power cable*
- ✓ *Full-function remote control with two 'AA' batteries (USA and Canada only)*
- ✓ *This owner's manual*
- ✓ *Warranty and product registration information (USA and Canada only)*

As soon as the CD Player is safely removed from its box and placed down, perform a thorough physical inspection and report any physical damage to your dealer immediately. We suggest that you keep all of the original packaging, storing it in a safe, dry place in the event that you're required to transport the CD Player. The customized packaging is specially designed to protect the **MOON Equinox *SE*** CD Player from potential damage that may occur during shipping.

Please write the serial number of your new Simaudio **MOON Equinox *SE*** in the space provided below for future reference.

Serial No.: _____

Introduction

Your **MOON Equinox *SE*** CD Player incorporates many significant design features to achieve its "world class" level of performance. This is an abbreviated list of the more important features:

Separate digital and analog power supplies using toroidal transformers with **seven stages** of DC voltage regulation.

BurrBrown BB1730E high-resolution 24-bit/192-kHz Digital-to-Analog Converter and 8X oversampling digital filter.

Internal upsampling which achieves a **24-bit/352.8kHz** level of resolution.

Philips based transport mechanism using in-house developed control software.

Accurate 50 PPM digital clocking system.

Advanced analog signal path using a DC servo circuit and **proprietary 6db/octave analog filter.**

Pure copper circuit board tracings with extremely low impedance characteristics.

Separate digital and analog audio circuitry mounted on a single circuit board, **each with their own respective ground plane**, which minimizes signal path lengths and eliminates any potential for interference and signal degradation.

Rigid chassis construction to minimize the effects of external vibrations.

Accurate matching of the very finest high quality electronic components in a **symmetrical** circuit design.

Designed to be **powered up at all times** for optimal performance.

Low operating temperature for a longer than normal life expectancy.

Installation & Placement

The **MOON Equinox *SE*** requires reasonable ventilation to maintain an optimum and consistent operating temperature. As a result, it should be placed in a location with empty space around it for proper heat dissipation. As well, it should be placed on a solid level surface. You should avoid placing it near a heat source or inside a closed cabinet that is not well ventilated as this could compromise the CD Player's performance and reliability. The **Equinox *SE*** uses a toroidal transformer; even though it is well shielded, you should not place the CD Player too close to source components sensitive to EMI, such as turntables and phono preamplifiers. *You should never place another component directly on top of this CD Player.*

Since household dust is an excellent insulator of heat, we suggest that you clean both of the curved side-mounted heat sinks on a regular basis. A smooth nylon brush with long bristles (ie. paint brush) is recommended for this task. Finally, you should make all of your audio signal connections prior to making the AC connection between the **Equinox *SE*** and the AC wall outlet.

Finally, if you have not used a CD Player before, you may be unaware that compact discs are very easily damaged, and must be kept very clean. Always store them in their jewel cases. Dirty or finger-marked discs will reproduce music poorly. Moreover, the player may even mute parts of a track, or be unable to find some tracks. If you need to clean a CD remember to use a soft lint-free cloth, using a radial action (i.e. starting from the center and aiming towards the edges). Do not attempt to clean a compact disc using a rotating motion.

Front Panel Controls

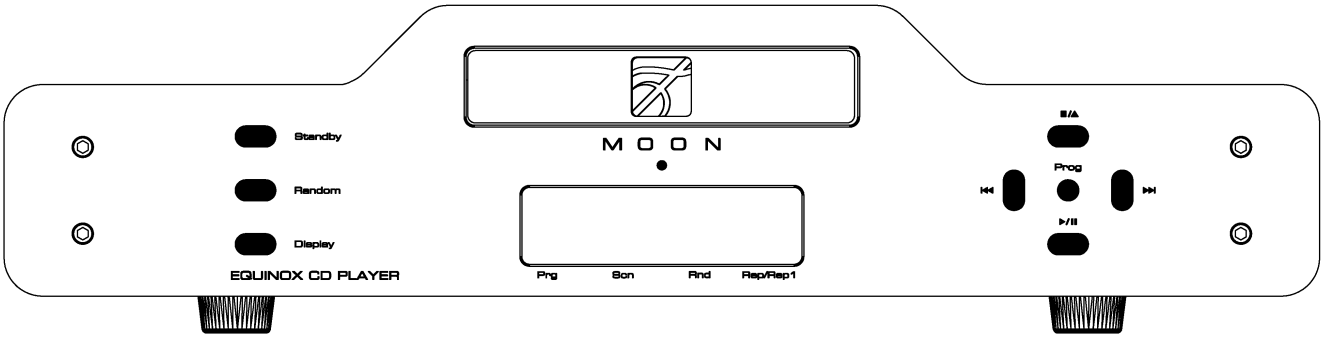

Figure 1: MOON Equinox *SE* Front Panel

The front panel will look similar to Figure 1 (above). The large digital display window indicates the track number of the compact disc currently playing (or the total number of tracks in stop mode) and time information. There are four (4) different display modes for time information; the one engaged is dependant on the "Display" button which is described in detail on the next page of this section. On the bottom of the display window, from left to right, are five (5) indicator LED's that will illuminate as follows (each of these functions is described in detail in this section):

'Prg'	-	when Program mode is engaged
'Scn'	-	when Scan mode is engaged
'Rnd'	-	when "Random" play mode is engaged
'Rep'	-	when repeat mode is engaged for the entire compact disc
'Rep1'	-	when repeat mode is engaged for one (1) specific track

The "Standby" button disengages the transport mechanism from the rest of the **Equinox *SE*'s** circuitry and turns off the digital display. However, when in "Standby" mode, all digital and analog audio circuitry remains powered up to help maintain optimal performance. The blue LED on the **Equinox *SE*** will no longer be illuminated when the player is in "Standby" mode.

The "Random" button, when pressed, will play each of the tracks on a compact disc in a completely random order, as opposed to the sequential order as they appear on the disc. If you have already created a program of selected tracks, it will play these programmed tracks in a random order.

The "Display" button allows you to scroll through the four (4) different display modes for time information, as well as turn the digital display on and off. Each time you press the "display" button, the system scrolls to the next time information mode. By default, the **Equinox *SE*** will display the elapsed time of the track currently playing. The scrolling order is as follows:

1. Elapsed time of the current track
2. Remaining time of the current track
3. Elapsed time of the entire compact disc (or programmed tracks)
4. Remaining time of the entire compact disc (or programmed tracks)

Front Panel Controls (continued)

To load a compact disc into the **Equinox *SE***, press ■/▲, put the CD in the drawer with the label side facing up and press ■/▲ again to close the drawer. When a CD is first loaded into the **Equinox *SE***, the total number of tracks, and total playing time will appear in the display. In the event that you load a CD that contains no musical tracks (i.e. data only), the word 'DATA' will appear in the large digital display window and the drawer will automatically open to eject this unplayable CD.

Press ▶/⏸ to begin playing a compact disc. Pressing ▶/⏸ while a disc is already playing results in the current track being paused; Press ▶/⏸ again to resume playing the disc.

Press ⏮ to search backward or ⏭ to search forward through the compact disc's tracks. When you've located the track number, press ▶/⏸ to begin playing that track. In the event that you initiate a forward or backward track change while a disc is already playing, it will automatically start playing the track you select; you need not press ▶/⏸.

Press and hold ⏮ to scan backward or ⏭ to scan forward through the track currently playing.

Press ■/▲ to stop the compact disc from playing. The laser will return to the start position of the disc. To open the drawer and remove the compact disc, press ■/▲ again.

If you want to turn the display off, press and hold the "Display" button for 2 seconds. When the display is off, it will still come back on for a short period of time whenever you press any of the buttons located on the front panel or the remote control; when you are done, the display will automatically turn off again. To turn the display back on again, press the "Display" button again. The sonic performance of the **MOON Equinox *SE*** CD Player may improve slightly when the display is turned off.

The "Prog" button allows you to program a selection of tracks in the order that you wish to listen them. After loading a compact disc into the **Equinox *SE***, select the first track you wish to listen to, using the ⏮ or ⏭ buttons and then press "Prog". To program a second track, select it the same way you did for the first one and press "Prog" again. Repeat this operation as many times as you want to program tracks. Once you've completed programming your track selection(s), the digital display window will show the number of tracks that have been programmed and their total time. To begin playing your programmed selections, simply press the ▶ button. Pressing ■ will only suspend the playing of the programmed selection. Pressing ■ a second time will clear your program selection from the **Equinox *SE*'s** memory. As well, opening the drawer at any time will also clear your program.

The "Scan" button (Remote control operation ONLY) forces the **Equinox *SE*** to play the first ten (10) seconds of each track on the compact disc currently loaded into the player. When a track is playing in "scan" mode, you can press the ▶ button to continue listening to the remainder of the current track; doing this automatically terminates the "Scan" mode.

The "Repeat" button (Remote control operation ONLY) performs three (3) functions: Pressing "Repeat" once will result in the entire disc being played again once it has reached the end of the final track. Pressing "Repeat" a second time will result in the track currently playing being repeated again once it has ended. To cancel this mode, simply press the "Repeat" button a third time.

If you have created a program of selected tracks, pressing "Repeat" once will result in your entire program repeating itself once it has completed its cycle; Pressing "Repeat" a second time will result in the current track from your program being played again once it has ended; Pressing "Repeat" a third time will terminate the "Repeat" mode.

Rear Panel Connections

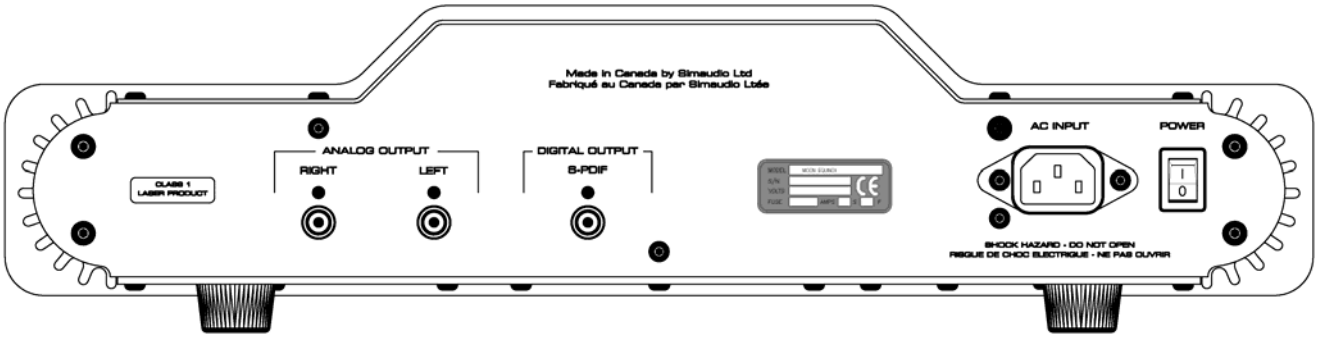

Figure 2: MOON Equinox *SE* Rear panel

The rear panel will look similar to Figure 2 (above). On the left side is the analog audio output. There is one pair of RCA analog audio output connectors that you should connect to a stereo analog input on your preamplifier or integrated amplifier. Don't hesitate to use good quality interconnect cables.

There is one (1) "Digital Audio Output" located near the center of the rear panel. It uses an RCA connector labeled "S/PDIF" which allows you to use the **Equinox *SE*** as a CD transport whereby, digital signal processing will be handled externally by another DAC or surround processor. You should use a 75Ω digital audio cable terminated with RCA connectors.

Finally on the right side is the "AC Power" section with a main power switch ("0"=off, "1"=on) and IEC receptacle for the included AC power cord. Alternatively, you may use a dedicated high-performance AC power cord designed for CD Players.

All rear panel connectors have been chosen because they provide the best possible connections for your unit. A poor contact will degrade the signal substantially, and plugs and sockets should all look clean and free of dirt and corrosion. The easiest way to clean them is to remove the cables from their sockets and push them back in again. This procedure requires that your CD Player and the rest of your components be completely turned off. Not heeding this warning may result in serious damage to your equipment. Special contact cleaning fluids and enhancers should not be used, as they deposit a difficult to remove residue which degrades the performance of your components.

Operating the Equinox *SE*

We recommend that you leave your **MOON Equinox *SE*** CD Player powered up at all times to maintain optimal performance. In the event that you plan to be away from your home for a few days, powering off the CD Player may not be a bad idea. Once fully "broken-in", please keep in mind that your **Equinox *SE*** will require several hours of playing time before it reaches its peak performance after you've powered it up again.

Turning on your MOON Equinox *SE* for the first time

Prior to turning this CD Player on for the first time, make sure that every cable is properly connected to avoid any problems. Then turn on your CD Player in the following manner:

1) Flick the main rocker switch labeled "POWER" to the '1' (on) position on the rear panel.

2) Press the push button labeled "Standby" on the **Equinox *SE*,** the blue LED will confirm operation and the digital display will show 'no disc'. You are now ready to load a compact disc and begin listening to music.

On and Off Sequence

To avoid having any annoying noises (i.e. "thumps" and "pops") emanate from your speakers when powering your **Equinox *SE*** on or off, you should

1) Always power up your **Equinox *SE*** CD Player before powering up your preamplifier and/or integrated amplifier**.**

2) Always power down your **Equinox *SE*** CD Player after powering down your preamplifier and/or integrated amplifier.

Standard Remote Control Operation

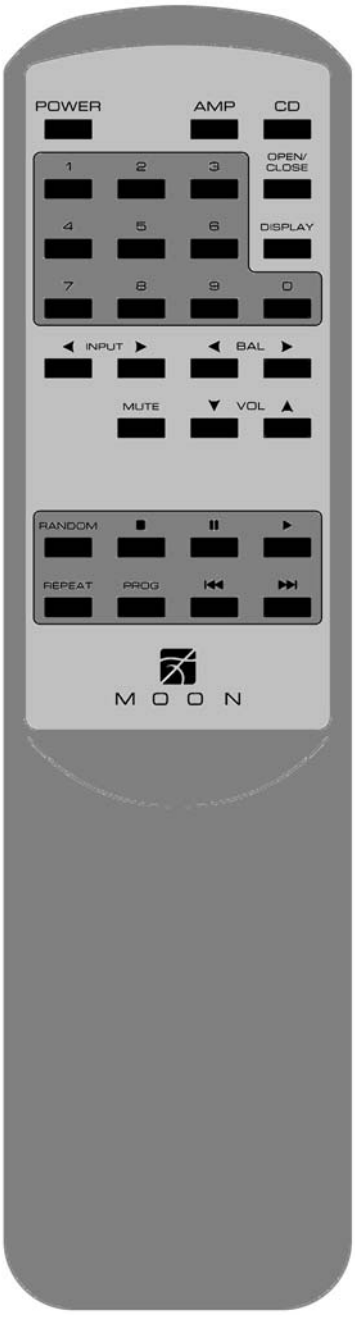

Figure 3: CRM Remote Control

The **MOON Equinox *SE*** CD Player uses the **'CRM'** full-function remote control (figure 3). It operates on the Philips RC-5 communication protocol and is can be used with other Simaudio MOON components.

The **'CRM'** remote uses two AA batteries (included). To install them, simply slide the back plate off in the direction of the arrow; insert the batteries in the correct direction and then replace the back plate.

To engage the CRM remote for use with the **MOON Equinox *SE*** CD Player, you must first press the button labeled **CD**.

The **POWER** button located on the upper left will switch the CD Player to either 'Stand by' or 'On' mode.

Certain buttons found on this remote control perform identical functions to their corresponding button located on the **Equinox *SE*'s** front panel. Please refer to pages 7 through 9 for a more detailed description when noted:

0 thru 9	Direct access track number selection
OPEN/CLOSE	Open/Close the Compact Disc drawer
DISPLAY	Press Once: Changes the time display mode on front panel (please refer to page 7 for the four time modes)
DISPLAY	Press and hold: Turns the front panel display on and off
RANDOM	Same as the "Random" button on the front panel
■	Stop playing the CD's current track
II	Pauses the player
▶	Play the compact disc loaded into the player
REPEAT	Same as the "Repeat" button on the front panel
PROG	Same as the "Prog" button on the front panel
⏮	Press Once: Go back to the previous track on the disc
⏮	Press and hold: Scan backward through current track
⏭	Press Once: Skip to the next track on the disc
⏭	Press and hold: Scan forward through current track

Optional Remote Control Operation

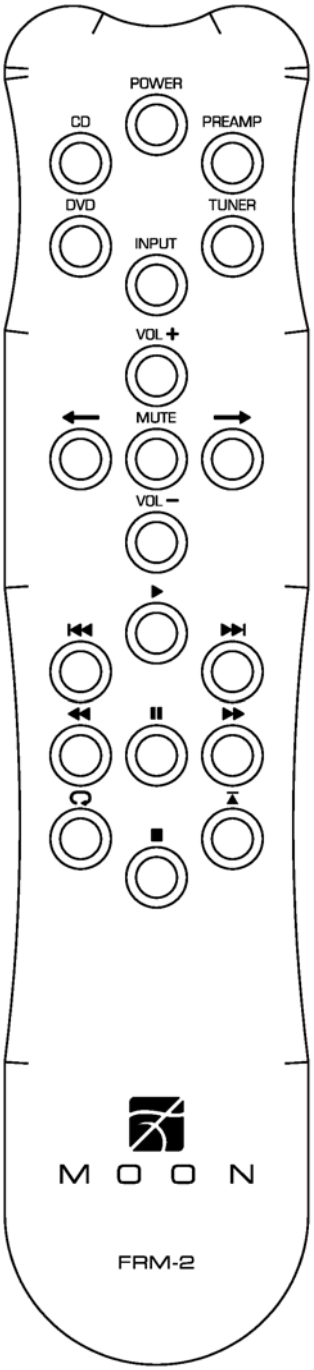

Figure 4 FRM-2 Remote Control

The **MOON Equinox *SE*** CD Player uses the **'FRM-2'** full function, all aluminum remote control (figure 4). It operates on the Philips RC-5 communication protocol and is can be used with other Simaudio MOON components.

The **'FRM-2'** remote uses three AAA batteries (included). To install them, use the supplied Allen key to remove the three screws located on the back plate; insert the batteries in the correct direction and then screw the back plate back into place.

To operate the **Equinox *SE*** with this remote control, you must first press the button labeled 'CD' on the top left corner.

The lower section of the **'FRM-2'** has nine (9) buttons which operate the **Equinox *SE***. All of these functions are available on either the top panel or front panel of the CD Player. Please refer to these aforementioned sections for a more detailed description of each of these buttons:

- ▶ Play the compact disc loaded into the player
- ⏮ Skip to the previous track on the disc
- ⏭ Skip to the next track on the disc
- ⏪ Scan backwards through the current track of the disc
- ⏸ Pauses the player
- ⏩ Scan forward through the current track of the disc
- ⮌ Repeat the entire disc or the current track
- ■ Stop playing the current track
- ▲ Open/Close the CD drawer

Specifications

Configuration	Single-ended
Power Supply Transformer	25VA
Power Supply Capacitance	13,500µF
Transport Mechanism	Philips L1210/S
Digital Filter / Digital-to-Analog Converter	BurrBrown PCM1730E
Frequency Response (audible)	20Hz - 20kHz +0/-0.2dB
Frequency Response (full range)	2Hz - 72kHz +0/-3dB
THD @1kHz, 0dBFS (A-weighted)	< 0.001%
Intermodulation Distortion	< 0.003%
Dynamic Range	> 110dB
Signal-to-noise Ratio	> 109dB @ full output
Slew Rate	50V/µs
Channel Separation	> 109dB
Low Level Linearity	< ±1.0dB to below 110dBFS
Intrinsic Jitter	< 50 picoseconds RMS
Analog Output	1 pair RCA
Digital Output	S/PDIF RCA
Maximum Analog Output @ 0dBFS	2.0 Volts RMS
Analog Output Impedance	100Ω
Digital Output Impedance - S/PDIF	75Ω (0.5 Volts)
Standard Remote Control	Full-Function
Optional Remote Control	All Aluminum Full-Function
Power Consumption @ idle	8 Watts
AC Power Requirements	120V / 60Hz or 240V / 50Hz
Shipping Weight	22 lbs / 10 Kgs
Dimensions (W x H x D, inches)	17 x 4.25 x 15

Fuse Replacement: For the 120V version use a 0.5A slow blow (5 x 20mm size).
For the 230V version use a 0.25A slow blow (5 x 20mm size).